

**FINAL
REMEDIAL ACTION PLAN
for
TREATMENT OF INVESTIGATION DERIVED WASTES
at the
FORMER HONEY LAKE DEMOLITION AREA
SIERRA ARMY DEPOT**

EXECUTIVE SUMMARY

This Remedial Action Plan (RAP) for the treatment of investigation derived wastes associated with an Ordnance and Explosives (OE) investigation of approximately 3,500 acres of Honey Lake, has been prepared by the Department of Toxic Substances Control (DTSC) to comply with provisions of the California Health and Safety Code, Section 25356.1. The area to be investigated is located on the eastern portion of Honey Lake, adjacent to Sierra Army Depot (SIAD). Figures 1-1 and 1-2 show the locations of Honey Lake, SIAD, and the area to be investigated.

Honey Lake is an intermittent body of water, approximately 60,000 acres in size, whose water level depends upon the amount of rain and snow fall over the course of several years. When there are periods of ample precipitation, the lake contains water with an average depth of approximately 3 feet. During periods of low rain and snow fall, the lake dries, exposing the lake bed. The area to be investigated for ordnance is currently dry.

SIAD conducted demolition and burning of excess, unserviceable, and/or obsolete munitions following World War II. The first documented demolition activity on the Honey Lake bed occurred in 1945. Use of the dry lake bed for demolition and burning continued into the mid-1950's, possibly as late as 1958. Items to be destroyed were stacked together on the lake bed, explosive charges were attached to the munitions, and the items were detonated. The resulting explosion resulted in the destruction of the waste munitions, and the creation of large amounts of scrap metal that have been "kicked out" onto the area surrounding the lake. However, some items may not have been destroyed entirely, and partially destroyed munitions and scrap metal containing residues of explosive material have been created as a result. It is possible that some items may not have been destroyed.

The objectives for the investigation are to characterize the subsurface environment for potential hazards posed by OE wastes. In order to facilitate the transfer of ownership of Honey Lake from the United States government back to the State of California, the following activities will be conducted:

- A geophysical survey investigation of approximately 3,500 acres using a combination of airborne, surface towed, and handheld devices to determine the extent of subsurface debris (anomalies),
- The investigation, by excavation, of a number of individually identified items and larger areas with high concentrations of subsurface anomalies,
- The treatment of collected items, and,
- The preparation of a report, called an Engineering Evaluation/Cost Analysis (EE/CA), which will detail the results of the investigation, and make recommendations for any additional actions necessary to provide an adequate level of protection for the intended uses of the area.

Subsurface investigative activities (digging) are likely to find items that contain explosive materials. These items will be considered to be hazardous wastes, and will require treatment prior to being certified as uncontaminated scrap metal. Under this RAP, several treatment options are available for items with explosive residues. These include:

- Leave the item in place,
- Remove the item to a secure location and treat the item by open detonation,
- Remove the item to a secure location and treat the item by enclosed detonation within a "blast chamber" device,
- Remove the item and transport it to an approved, off-site treatment/disposal facility, or,
- Attach small demolition charges and destroy the item where it is found ("blow in place")

These alternatives are summarized in Section 5 of this document.

Due to environmental conditions, and the length of time items have been exposed to the environment, some items may be unstable and too dangerous to move. For these items, the only safe alternative is to destroy the item in place. The preferred alternative for the treatment of items that are safe to move, is to remove them to a secure location and treat them by enclosed detonation within a blast chamber device. Some recovered items may be too large to safely treat within the blast chamber. Under these circumstances, items will be destroyed by open detonation.

The preferred treatment options for investigative derived wastes have been selected because they: (1) comply with applicable or relevant and appropriate requirements (ARARs), and would be protective of human health and the environment, (2) are effective in both the short- and long-terms, (3) reduce the volume and mobility of contaminants, and, (4) are implementable at a reasonable cost.

Regulatory agency acceptance of the proposed alternatives have been discussed and evaluated in the preparation of this document. The public is encouraged to become involved in the remedy selection process by providing comments on this document, and the accompanying California Environmental Quality Act (CEQA) Draft Initial Study and Proposed Negative Declaration.

Documents describing the environmental conditions relating to Honey Lake are available for public review in the information repositories located at Sierra Army Depot, the Susanville public library, the Reno public library, and at the DTSC Sacramento regional office.

Any treatment of ordnance material, by either open detonation or enclosed detonation within the blast chamber device, is limited to those items recovered during investigative activities associated with the Former Honey Lake Demolition Area. Any emissions to the air resulting from the treatment of recovered ordnance items must comply with SIAD's Title V Operating permit, and Lassen County Air Pollution Control District regulations.

The selected treatment options for explosive ordnance items located during the investigation of the Former Honey Lake Demolition Area are: (1) demolition in place for items that are unsafe to move and pose an immediate safety hazard; (2) for items that are safe to move: removal to a secure location for temporary storage of less than one year and enclosed detonation within a blast chamber device, and; (3) open detonation for items that are too large and exceed the capacity of the blast chamber. All scrap metal that is not contaminated with explosive residues will be transported to a metal recycling facility.

1.0 SITE BACKGROUND

SIAD is located in the Honey Lake Valley of Lassen County, approximately 4 miles west of the California-Nevada border, and 5 miles east of U.S. Highway 395 (Figure 1). The city of Susanville is located approximately 30 miles to the northwest, and Reno, Nevada is located approximately 55 miles to the south. Neighboring communities include Herlong, Sage Flats, Doyle, and Milford. Honey Lake, which forms the western boundary to SAID, covers approximately 60,000 acres.

Military use of the Honey Lake area began during the summer of 1931, when the Army Air Corps used the dry lake bed to support aerial gunnery training activities. Gunnery training included firing machine guns at aerial-towed targets and fixed ground targets on the lake bed. The following summer, similar exercises were held on Honey Lake.

In March 1932, after the Army Air Corps proposed using Honey Lake and the surrounding area as a bombing range, 400,000 acres of public lands in the Honey Lake area were granted to the War Department. In June 1933, the State of California ceded Honey Lake to the federal government for military use. However, the newly acquired land was never used by the Army Air Corps as a bombing range.

In 1941, the Army selected land east of Honey Lake as the site where the Sierra Ordnance Depot would be established. Construction of the depot began in 1942. In 1944, the parcel containing Honey Lake was transferred to the depot. The Sierra Ordnance Depot was later renamed the Sierra Army Depot. SIAD conducted demolition and burning of excess, unserviceable, and/or obsolete munitions following World War II. The first documented demolition activity occurred in 1945 on the dry lake bed of Honey Lake. Use of the lake bed for demolition and burning continued through the 1950s. Historical records indicate that the Honey Lake Demolition Range was used through 1954, with use continuing possibly as late as 1958. An exact inventory of items destroyed on the bed of Honey Lake is not available, but items are known to range from 20 millimeter ammunition to 2,000 pound general purpose bombs. Due to the "kick out" of material from the demolition locations, an area of approximately 3,500 acres is contaminated with scrap metal and ordnance/explosive wastes.

Since 1991, SIAD has held regularly scheduled meetings with both DTSC and the Lahontan Regional Water Quality Control Board to direct the investigation and remediation of sites with contaminated soils and/or groundwater. Over the years, numerous meetings have been held to discuss the status of Honey Lake and adjacent areas that have been impacted by demolition activities on the lake. The SIAD Restoration Advisory Board has been informed of the results of previous investigations on the adjacent Eastshore Base Realignment and Closure (BRAC) parcel, and has provided input on their desire for the Army to address the investigation and remediation of the Honey Lake ordnance demolition area.

2.0 PREVIOUS ORDNANCE AND EXPLOSIVES INVESTIGATIONS

It is likely that periodic sweeps to remove ordnance materials from the surface of the lake bed were conducted during the period of operations in the 1940's and 1950's. However, no documentation can be located to support this assumption. The first documented OE investigation associated with the former Honey Lake Demolition Area occurred in 1992 and consisted of a surface and subsurface clearance. A total of four 1-acre areas, situated on the lake bed, were cleared of all metallic (ferrous and non-ferrous) materials to a depth of 8 inches. The investigation resulted in the recovery of one live item, a 20mm high explosive incendiary (HEI) round, and 3,768 pounds of uncontaminated scrap metal.

An OE field investigation of the Eastshore BRAC parcel area was conducted in two phases during March - April 1999, and January - April 2000. The area investigated is not located on Honey Lake, but is immediately adjacent to the Former Honey Lake Demolition Area, and has been impacted by the kick out of ordnance items and scrap metal from those operations. The first investigative phase involved performing a geophysical investigation to detect and map surface and subsurface metallic objects (i.e., anomalies) that could be OE scrap or OE/UXO. The surface and subsurface anomalies were then excavated and removed.

As a result of the field investigation, 12 OE/UXO items were recovered from the Eastshore BRAC parcel. All OE/UXO items were provided to the U.S. Army's 734th Explosive Ordnance Disposal Unit, stationed at SIAD, for disposal.

The second phase of the Eastshore BRAC parcel investigation was focused on an area of approximately 125 acres called the Function Test Range. This area was used to test different types of ordnance to determine if they worked properly. During the first phase of investigation, the geophysical survey identified numerous anomalies in this area. With the exception of a discrete 10 acre area with an excessive amount of surface debris, 100% of the detected anomalies were investigated down to a depth of 4 feet. Approximately 100 OE items were recovered. The investigation also discovered about 12 locations (one large) where it appears that boxes of time delay fuses were placed in shallow holes and burned. Not all of the items were destroyed, and approximately 2,600 were recovered. All of these items were placed into a storage igloo, and were later destroyed when it was determined that they were deteriorating, and posed a safety hazard.

3.0 SUMMARY OF REMOVAL ACTIONS

Currently, the U.S. Army Corps of Engineers is undertaking a Time Critical Removal Action (TCRA) to remove OE wastes from the surface of the lake bed within the Former Honey Lake Demolition Area. As the lake level has dropped, the waterline has receded and exposed the public to potentially dangerous ordnance related materials. In order to protect the public from this hazard, the U.S. Army Corps of Engineers has initiated the TCRA to immediately protect the public by removing the most accessible danger, ordnance related materials laying on the lake bed surface. The activities described in this document are follow-on investigations in support of a document called an Engineering Evaluation/Cost Analysis.

4.0 SUMMARY OF SITE RISKS

The presence of potential unexploded ordnance on Honey Lake presents an unacceptable risk to human health and the environment. There is minimal fencing in the area, and signs warning of the potential danger from ordnance items have been vandalized, or have otherwise deteriorated. During periods when the lake is full of water, this risk is mitigated because exposure to potentially dangerous items within the former demolition area is minimized. Currently, the lake has dried and there are no impediments to trespassers. Tracks from all terrain vehicles have been identified within the area, and evidence of tampering with ordnance scrap has been noted. A removal of surface material will significantly reduce the potential for human risk. The risks posed by OE materials beneath the lake bed surface are unknown, but could be substantial. The purpose for investigative activities is to characterize those potential risks. Long term physical and institutional controls will most likely be recommended as part of any final remedy for this site.

5.0 SUMMARY AND EVALUATION OF DISPOSAL ALTERNATIVES

Several of the available options for disposal of potentially unexploded ordnance items constitute treatment of a hazardous waste, and therefore require either an approved RAP, or a Hazardous Waste Treatment Permit. This RAP is being prepared in support of remedial investigation activities. Accordingly, a full evaluation of remedial alternatives that would be prepared in a Feasibility Study, has not yet been conducted. The proposed activities are in support of a permanent remedy, but are not intended to be the final remedy for this site.

During the process of investigating subsurface anomalies, scrap metal, ordnance items that were not destroyed, or scrap metal still containing explosive residues may be found. Uncontaminated scrap metal will be collected and recycled. Items that contain explosive materials will need to be rendered safe by removing the explosive material.

All handling, transportation, and disposal operations performed will be consistent with the following DOD guidance and standards:

- Ammunition and Explosives Safety Standards, Department of Defense, DOD 6055.9.STD
- Safety and Health Requirements, U.S. Corps of Engineers, EM 385-1-1
- Explosives Safety Program, U.S. Army, AR 385-64
- Accident Reporting and Records, U.S. Army Corps of Engineers Supplement I to AR 385-40
- Ordnance and Explosives Response, U.S. Army Corps of Engineers, EM 1110-1-4009

Any treatment of ordnance material, by either open detonation or enclosed detonation within the blast chamber device, is limited to those items recovered during investigative activities associated with the Former Honey Lake Demolition Area. The following options are available for treating these types of waste:

Alternative 1 – Leave in Place/No Further Action (NFA). This alternative provides a basis for cost and risk reduction comparisons. This alternative would leave site conditions unchanged.

Alternative 2 - Removal with Onsite Open Detonation. Items that are found to contain explosive materials will be evaluated to determine if they are safe to move. Items that are safe to move will be removed and placed into secured storage. It is anticipated that collected items will be transported to a secure location within the SIAD boundaries, where explosive charges will be attached. When practical, engineering controls such as sandbags, will be used for blast and noise suppression. The items will then be detonated in order to render them safe.

Alternative 3 - Removal with Onsite Enclosed Detonation. For items that are safe to move, handling and storage procedures similar to those for Alternative 2 will be utilized. Items to be rendered safe will be placed into an enclosed vessel (blast chamber) where detonation charges will be attached. The resulting explosion is contained within the blast chamber, and the gaseous emissions are treated to remove hazardous constituents before they are released into the air.

Alternative 4 – Removal with Offsite Disposal. For items that are safe to move, handling and storage procedures similar to Alternatives 2 and 3 will be utilized. Items will be packaged for transport via rail or truck, and shipped under hazardous waste manifest, to an offsite facility approved for the disposal of explosives.

Alternative 5 – Demolition in Place. This option will be used for those items that are determined to be unsafe to move, and constitute an immediate safety hazard. The area will be secured by establishing safety exclusion zones. Engineering controls, such as sandbags, can be used for noise suppression and to reduce the effects from the blast. Demolition charges will be attached, and the item will be destroyed in place.

With the exception of Alternative 1 – No Further Action, all of the alternatives would be protective of Human Health and the Environment. Alternative 3 – Enclosed Detonation, provides a level of protection slightly higher than the other alternatives, due to the removal of hazardous constituents from emissions to the air. However, emissions from Alternatives 2 and 5 (open detonations) are not expected to be significant, due to the small size of explosive material that will be treated. Alternatives 2 and 5 will only be used when enclosed detonation within the blast chamber is not possible, due to safety concerns, or if an item is too large for the blast chamber.

With the exception of Alternative 1, all other alternatives would comply with Applicable or Relevant and Appropriate Requirements, would be effective in both the short and the long-term, and would result in a reduction of toxicity, mobility, and volume through the treatment of hazardous waste. All options are implementable, however Alternative 4 – Offsite Disposal, would involve the transportation of deteriorated explosive materials over public highways, which may pose significant hazards. Actual costs have not been determined for the alternatives, although Alternative 4 – Offsite Disposal, would clearly be the most expensive. Enclosed Detonation would be less expensive than Alternative 4, but more expensive than Alternatives 2 and 5.

Alternative 1 – No Further Action, would not be acceptable to regulatory agencies or the community. Alternatives 2, 3, 4, and 5 are potentially acceptable to regulatory agencies, provided adequate safeguards are used to minimize the impacts from these options.

Alternatives 2 and 5 involve the open detonation of explosive materials. Members of the local community have voiced strong opposition to Sierra Army Depot's application for a Hazardous Waste Facility Permit for the Open Detonation/Open Burning of unuseable or obsolete munitions. The treatment activities to be conducted under this RAP are not associated with SIAD's permit application, and are limited to items located during the investigation of the Former Honey Lake Demolition Area. The amount of materials to be treated as a result of this investigation are very small in comparison to those associated with past demolition operations. Members of the community have also voiced a strong desire for the clean-up of the Honey Lake parcel. Alternatives 2 and 5 will only be used when absolutely necessary. For these reasons, it is likely that the proposed alternatives will be acceptable to the community.

6.0 DECLARATION

This Remedial Action Plan (RAP) for the Former Honey Lake Demolition Area at Sierra Army Depot presents the preferred response actions that will be chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and Chapter 6.8 of the California Health and Safety Code. This RAP explains the factual basis for selecting the response actions for the treatment of items uncovered during the investigation of the Former Honey Lake Demolition Area. The information supporting the preferred response actions is contained in environmental documents available at the information repositories.

Section 25356.1 (e) of the California Health and Safety Code requires that a RAP approved by DTSC include a non-binding preliminary allocation of financial responsibility among all identifiable potentially responsible parties. Upon consideration of all of the evidence, DTSC has concluded that the preliminary non-binding allocation of financial responsibility for this RAP is as follows:

- United States Army, Sierra Army Depot: 100%

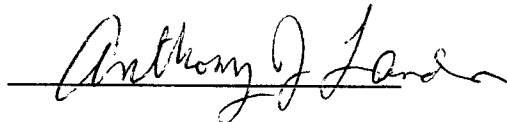
The content of this RAP is based upon recommendations in the U.S. Environmental Protection Agency's Interim Final Guidance on Preparing Superfund Decision Documents (EPA, 1986), and DTSC Policy and Procedure EO-95-007-PP.

7.0 SELECTED REMEDY

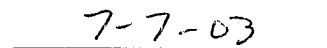
The selected treatment options for explosive ordnance items located during the investigation of the Former Honey Lake Demolition Area are: (1) demolition in place for items that are unsafe to move and pose an immediate safety hazard; (2) for items that are safe to move: removal to a secure location for temporary storage of less than one year and enclosed detonation within a blast chamber device, and; (3) open detonation for items that are too large and exceed the capacity of the blast chamber. All scrap metal that is not contaminated with explosive residues will be transported to a metal recycling facility.

Any treatment of ordnance material, by either open detonation or enclosed detonation within the blast chamber device, is limited to those items recovered during investigative activities associated with the Former Honey Lake Demolition Area. Any emissions to the air resulting from the treatment of recovered ordnance items must comply with SIAD's Title V Operating permit, and Lassen County Air Pollution Control District regulations.

APPROVED BY:



Anthony J. Landis, P.E.
Chief
Northern California Operations
Office of Military Facilities
Department of Toxic Substances Control



Date

8.0 REFERENCES

U.S. Army Corps of Engineers – Rock Island District, 1996. *Ordnance and Explosives Archive Search Report – Findings for the Honey Lake Range* (September).

U.S. Army Corps of Engineers – Huntsville and Sacramento Districts, 1998. *Draft Engineering Evaluation/Cost Analysis Work Plan, Former Honey Lake Demolition Range, Sierra Army Depot, Lassen County, California*. (October)

U.S. Army Corps of Engineers – Huntsville and Sacramento Districts, 2000. *Draft Engineering Evaluation/Cost Analysis Work Plan to Conduct additional Sampling at the, Former Honey Lake Demolition Range, Sierra Army Depot, Lassen County, California*. (February).

U.S. Army Corps of Engineers – Huntsville and Sacramento Districts, 2003. *Draft Work Plan Volume II Engineering Evaluation/Cost Analysis Work Plan, Former Honey Lake Demolition Range, Dry Lake Area, Sierra Army Depot, Lassen County, California*. (January)

Harding Lawson Associates, 2001. *Revised Final Environmental Baseline Survey, CERFA Report, Sierra Army Depot, Lassen County, California*. (March).

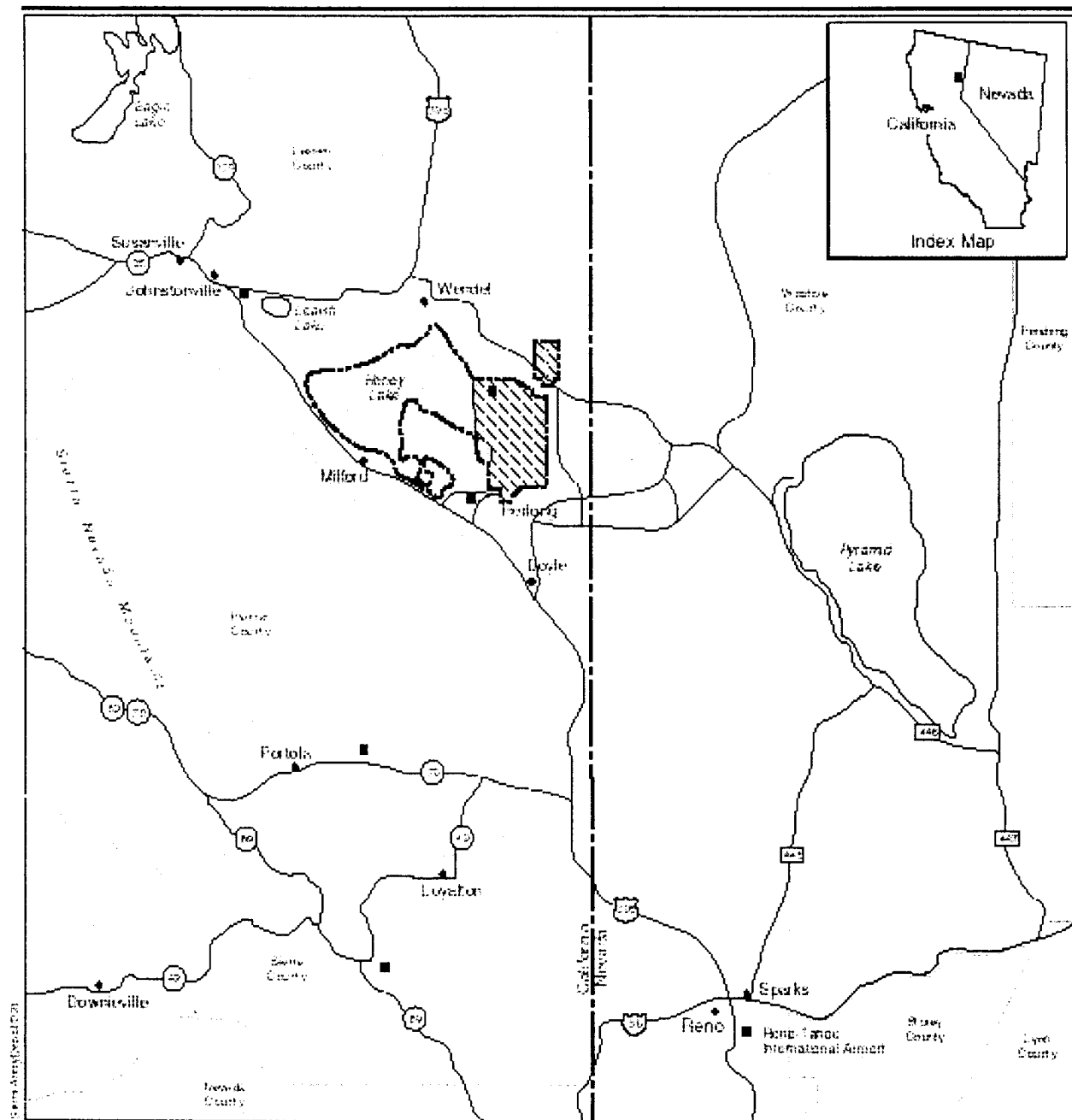
Personal Communications:

Mr. Chuck Hubbard - U.S. Army Corps of Engineers, Sacramento District

Mr. Beshara Yared - U.S. Army Corps of Engineers, Sacramento District

Mr. Roland Belew - U.S. Army Corps of Engineers, Huntsville District

Mr. David Ahlborn – Earth Tech, Inc.



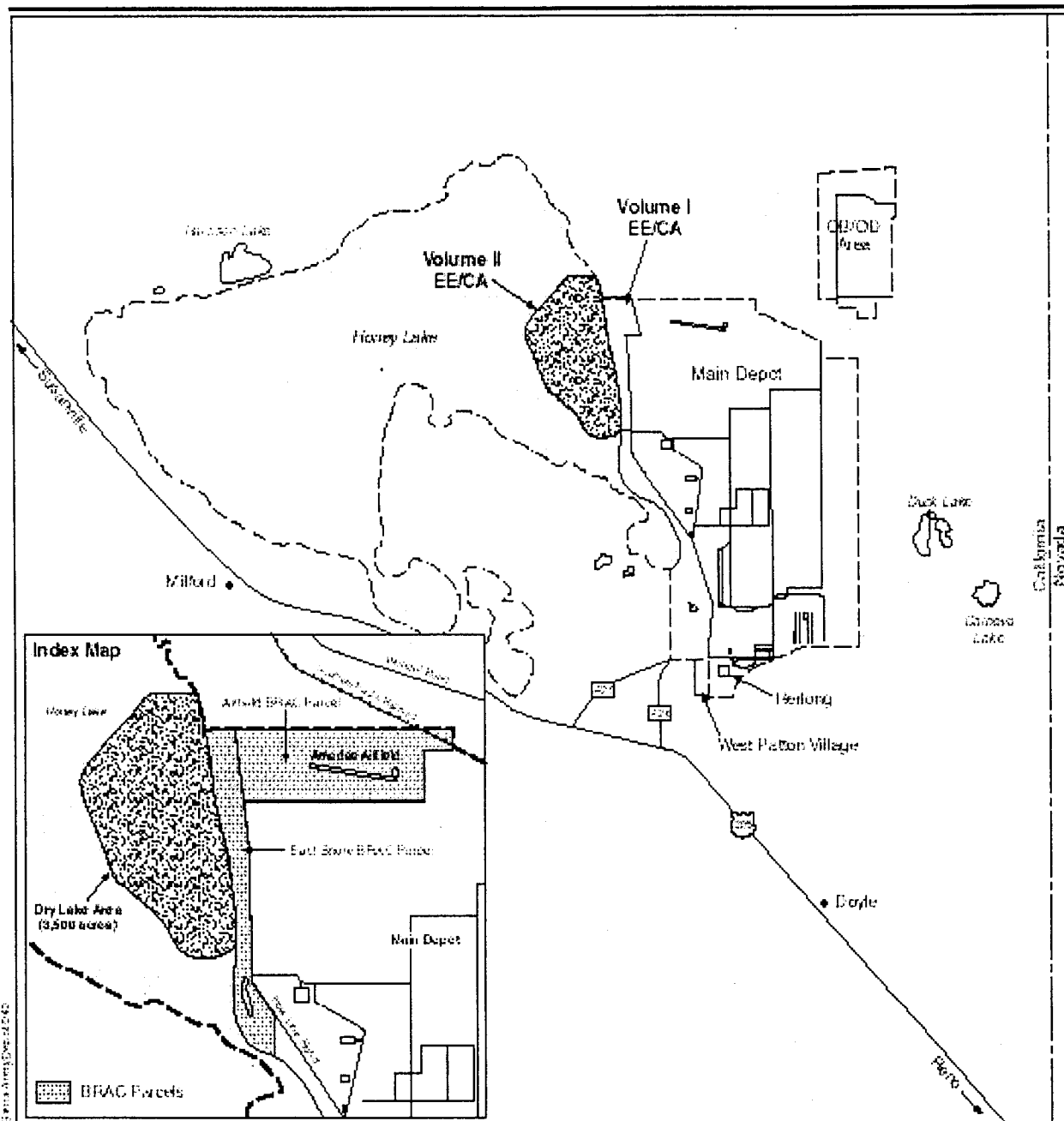
EXPLANATION

- | | | | |
|--|--------------------------|--|----------------------------|
| | County Boundary | | Sierra Army Depot Boundary |
| | State Boundary | | Sierra Army Depot |
| | Interstate Highway | | Airports |
| | U.S. Highway | | |
| | California State Highway | | |
| | Nevada State Highway | | |



Regional Map

Figure 1-1



EXPLANATION

- State Boundary
- Sierra Army Depot Boundary
- U.S. Highway
- County Road
- East Shore Area (1,565 acres)
(Volume I EE/CA)
- Dry Lake Area (3,500 acres)
(Volume II EE/CA)



Site Location of Sierra Army Depot

Figure 1-2

RESPONSE TO COMMENTS RECEIVED ON THE
DRAFT REMEDIAL ACTION PLAN for
TREATMENT of INVESTIGATIVE DERIVED WASTES
at the FORMER HONEY LAKE DEMOLITION AREA,
SIERRA ARMY DEPOT

COMMENT #1:

Received from Mr. Ken Smith, Lassen County Air Pollution Control District

"In accordance with provisions of Sierra Army Depot's Title V Operating Permit, munitions held in storage may be disposed of by OB/OD only after the Depot demonstrates the need for and is granted, by the District, a Rule 4:7/4:8 exemption for fire hazard and safe alternative.

An exception to this permit requirement applies to munitions that have been reclassified as unsafe.

Therefore, the District recommends that Alternative 2 be conditioned to reference compliance with SIAD's Title V Federal Operating Permit."

RESPONSE:

Concur. The United States Army Corps of Engineers, acting on behalf of Sierra Army Depot (SIAD), has been instructed to coordinate with the Lassen County Air Pollution Control District, prior to treatment of investigative derived explosive wastes. The following language has been added to the RAP Executive Summary: *"Any emissions to the air resulting from the treatment of recovered ordnance items must comply with SIAD's Title V Operating permit, and Lassen County Air Pollution Control District regulations."*

COMMENT #2:

Received from State of California Department of Transportation, District 2

"Based on the project information submitted, approval of this project will not adversely impact facilities under our jurisdiction; therefore, we have no comment."

RESPONSE:

Thank you for your response, no response necessary.

COMMENT #3:

Received from the Pyramid Lake Paiute Tribe

"The investigation for ordnance by surface scanning and excavation opens the possibility for the discovery of culturally relevant resources. " "...the Pyramid Lake Paiute Tribe would like to be informed of all archeological sites discovered..."

"...the Tribe would like to have representatives of the Tribe be involved with review and any further actions taken with regard to any and all archeological sites."

" On page 13, 3rd bullet of the Initial Study, one of the CEQA documents prepared for the Honey Lake Demolition Area Remedial Action Plan states, "collect, analyze, document, and archive a sample of data from the resource." Pyramid Lake Paiute Tribe is opposed to any and all types of destructive analysis of archeological resources."

RESPONSES:

The United States Army Corps of Engineers (USACE) is responsible for conducting surveys for archeological resources within the project area. The request to have tribal representatives present during future archeological surveys has been forwarded to the Corps of Engineers, Sacramento District. DTSC supports this request, and understands that the Pyramid Lake Paiute Tribe is in the process of arranging for a representative to participate in upcoming surveys.

DTSC has been assured by USACE that no destructive analysis of any kind will be performed upon archeological resources discovered as a result of this project.

COMMENT #4:

Received from the Susanville Indian Rancheria, addressed to Mr. Chuck Hubbard, U.S. Army Corps of Engineers, Sacramento District

"The Susanville Indian Rancheria (SIR) would like to request that a Native American monitor be present during archeological surveys and remediation activities associated with the transfer of Honey Lake from the Sierra Army Depot to the California State Lands Commission." "We understand there will be removal and clean up of all ordnance from the East Shore of Honey Lake. This sort of activity has the potential to significantly impact cultural sites. "Native Americans from this area ...would like to have a presence during any assessment or potential destruction of resources important to our heritage."

"SIR supports the preferred alternative mentioned in the Draft Remedial Action Plan for disposing of any unexploded munitions encountered during the remediation process. SIR encourages the use of alternative technology that reduces the release of hazardous wastes into the environment whenever possible."

RESPONSES:

The request from the Susanville Indian Rancheria (SIR) was addressed to the U.S. Army Corps of Engineers, Sacramento District office (USACE). DTSC supports the Susanville Indian Rancheria's request to have cultural monitors present during project activities. It is DTSC's understanding that arrangements between the SIR and the USACE have been made to have a cultural monitor present during archeological surveys.

The proposed alternatives for treatment of ordnance related wastes recovered during this project include the use of alternative technologies in the form of an enclosed blast chamber device.

COMMENTS #5 through #24: Received from Mr. Larry Beach, Kim Ramos, Jack Pastor and Residents Against Munitions.

COMMENT #5:

"Health & Safety code 25356.1 is cited to be complied with. H&S Code 25356.1(e)(3) requires – "The information to be provided shall include an assessment of Contamination." This has not been complied with.

RESPONSE:

Health and Safety Code Section 25356.1 contains the requirements for a Remedial Action Plan (RAP) document. This RAP document pertains solely to the treatment of ordnance items that are found as a result of investigating the extent of ordnance within the Former Honey Lake Ordnance Area. The assessment of chemical contamination is not part of this RAP. The collection of samples to assess potential chemical contamination will be conducted as part of the ordnance investigation. Information concerning the extent of contamination will be reported in the Engineering Evaluation/Cost Analysis (EE/CA) document for the Former Honey Lake Ordnance Area, which will be written following the completion of the investigation.

COMMENT #6:

"The CEQA document isn't sufficient as an informative document.

RESPONSE:

The Army is investigating the nature and extent of Ordnance/Explosive containing waste contamination on the Former Honey Lake Demolition Area in support of a final remedy for the Area under an Engineering Evaluation/Cost Analysis and Action Memorandum. As part of the investigation the Army will recover ordnance or ordnance parts which contain explosives. In order for the

Army to treat or dispose of those Ordnance/Explosive wastes in the State of California, the Department of Toxic Substances Control must issue a RCRA Hazardous Waste Treatment Permit or a Remedial Action Plan (RAP). In order for the Department of Toxic Substances Control to approve the RAP, the Department must conduct a CEQA review.

The CEQA "project" is limited to the scope of the RAP as described above. Therefore, the CEQA Initial Study must evaluate the potential for significant environmental impacts resulting from the "project". The CEQA Initial Study supports a determination that there will be no significant impact from the treatment of any ordnance/ explosive items recovered as a result of the investigation of the Former Honey Lake Demolition Area.

A separate CEQA "project" and subsequent CEQA review will be completed for the final remedy selected in the EE/CA scheduled for later this year.

COMMENT #7:

"It can't be assumed that munitions etc. were all "stacked" together on the lake bed", but as seen on helicopter geophysical mapping of metallic items, there is clearly the pattern of trenches in the area West of the lake shoreline. This is clearly not "kick out". This indicates items were buried or placed in trenches and burned or detonated. This increases the concern of soil contamination that should be addressed in this process."

RESPONSE:

The geophysical maps do not indicate the presence of trenches, but do clearly delineate lines of craters that were created by the demolition of ordnance on the lake bed surface.

The scope of this RAP is limited to the disposal options for any ordnance items recovered during the EE/CA investigation of Honey Lake. Ordnance items that lie beneath the surface of the Honey Lake bed will be investigated as part of the EE/CA. Sampling of soils for chemical contamination will be conducted as part of the investigation.

COMMENT #8:

"The actions to be taken are intended to investigate and characterize the subsurface environment for potential hazards posed by ordnance and OE." This should include UXO. "In order to transfer Honey Lake..." Soil testing should be done."

RESPONSE:

The term "ordnance and OE" is meant to include the possibility of unexploded ordnance (UXO). Items that lie beneath the surface of the Honey Lake bed will

be investigated as part of the EE/CA. Sampling of soils for chemical contamination will be conducted as part of that investigation. The scope of this RAP is limited to the disposal options for any ordnance items recovered during the EE/CA investigation of Honey Lake.

COMMENT #9:

"Soil and surface water testing is "Relevant and appropriate" and should be done as a matter of Environmental Justice. See EPA Region 1 Administrative Orders."

RESPONSE:

The sampling of soils for chemical contamination will be conducted as part of the EE/CA investigation (see above responses). The surface of the lake bed must be dry in order to conduct the EE/CA investigation. Therefore, surface water samples cannot be collected.

COMMENT #10:

"Cattle have been known to wander into the area and graze along the shoreline" (@ CEQA draft RAP, pg. 6) – This is another good reason why soil testing should be done."

RESPONSE:

See responses to Comments #7, 8, and 9 regarding soil sampling.

COMMENT #11:

"Vegetated areas along the east shore of the Lake," (CEQA Initial Study pg. 6) should be tested because of cattle (above #10) wildlife and because toxicity can be many times greater than in soil."

RESPONSE:

The scope of this RAP is limited to the disposal options for ordnance items recovered during the Honey Lake EE/CA investigation. Vegetated areas outside of the lake bed are part of the East Shore EE/CA, not the Honey Lake EE/CA investigation.

COMMENT #12:

"Surface water should be tested because (water) "is pumped from the lake onto adjacent agricultural lands" (CEQA draft RAP) (pg 21) Also for reasons stated in 10 & 11."

RESPONSE:

See response to Comment #9, above.

COMMENT #13:

"There will be no effect on existing or future water quality resulting from this project" (CEQA draft RAP pg. 22) How can this be considering C-4, RDX, etc. from blowing items in place?"

RESPONSE:

The primary method of disposal for this RAP is detonation within an enclosed blast chamber device. The blast chamber is equipped with air pollution control devices, which will preclude impacts to the surrounding environment. As stated in the quoted section of the CEQA Initial Study, "Removal of contaminated items has the potential to improve water quality in the area." Blowing items in place that contain explosive materials (C-4, RDX, etc.) will remove contaminants that already exist within the environment, and therefore, will not have a negative effect on existing or future water quality.

COMMENT #14:

"Completion of this project may allow for an increase in the future use of the area for recreational purposes ..." (CEQA draft RAP pg. 28) "Long term physical and institutional controls will most likely be recommended as part of the final remedy for this site." (CEQA draft RAP pg. 31) These statements are inconsistent. Please rectify.

RESPONSE:

The first quoted section from the CEQA Initial Study (pg. 28), is taken out of context. The quoted section states, "Completion of this project **may** (emphasis added) allow for an increase in future use of the area for recreational purposes, *once an appropriate final remedy is selected and approved.*"

Depending upon what level of cleanup is agreed upon in the final remedy, physical and institutional controls such as fencing, warning signs, restrictions on digging, or other land uses restrictions may be required. The agreed upon level of cleanup may be sufficiently protective of human health and the environment, so that no physical or institutional controls are required. Potential remedial alternatives cannot be evaluated or approved until the investigative activities are completed.

COMMENT #15:

"There is minimal fencing in the area and signs warning of the potential danger from ordnance items have been vandalized, or have otherwise deteriorated" (Draft RAP 40 summary of Rules & CEQA draft RAP pg. 33). The hazardous

waste area must be fenced, well maintained, capable of preventing intrusion of livestock and discouraging entry by unauthorized persons and posted with warning signs, to prevent hazards to health, safety or the environment. (See Interim Status Document Number CA 5210020843 #9 Fencing. Also see General Conditions (a). "The owner or operator shall ensure that the operation of the facility will not imperil public health and safety, wildlife, domestic livestock, or the environment." Chapter 30, Division 4, Title 22, California Administration Code.

RESPONSE:

This comment is outside of the scope of the RAP. The scope of this RAP is limited to the disposal options for ordnance items recovered during the Honey Lake EE/CA investigation. The applicability and enforcement of the Interim Status Document is not relevant to this Response to Comments.

COMMENT #16:

"References to "Sandbags may be used" should read Sandbags shall be used...

RESPONSE:

If items require disposal by open detonation, the procedures to be used (including the use of sandbags), will be under the direction of the Site Safety Officer. DTSC does not have the authority to require the use of sandbags, although it has encouraged the U.S. Army Corps of Engineers to do so as often as possible.

COMMENT #17:

"Items that can be safely moved and are too big for the blast chamber, can not be routinely OB/OD because they are subject to the Title V permit conditions RE: Rule 4:7 & 4:8. SIAD must demonstrate basis for a 4:8 exemption from OB/OD restrictions. See Title V Operating Permit #18 -98-TV-1 pg. 31. Please correct documents to reflect this.

RESPONSE:

Please see response to Comment #1, from the Lassen County Air Pollution Control District.

COMMENT #18:

Also, OB/OD can not take place on "no burn days" per Title V Permit (cond. #6). Please change to reflect same.

RESPONSE:

Please see response to Comment #1, from the Lassen County Air Pollution Control District.

COMMENT #19:

"Soil, surface water and vegetation should be tested for contamination from OE and UXO to protect the public, wildlife and the environment."

RESPONSE:

As previously indicated, sampling for chemical contamination is not part of this RAP. Sampling for chemical contamination will be performed as part of the EE/CA investigation.

COMMENT #20:

"Another reason why testing should be done, is because an inventory of items destroyed in and on the lake bed is "not available" (Draft RAP under 1.0 Background)

RESPONSE:

See previous responses regarding soil sampling. An inventory of items collected from the Former Honey Lake Demolition Area will be kept.

COMMENT #21:

"Soil samples & test should be done randomly below UXO and when an item is unsafe to move and has to be blown in place. All soil contaminants found in soil following detonation should be addressed. See EPA Region 1 Administrative Orders."

RESPONSE:

Please see previous responses regarding the collection of soil samples for chemical contamination.

COMMENT #22:

"It appears decisions were made with out the benefit of comments or work being done being considered. The EE/CA was completed before April 8, 2003. Please explain why and how can this be???"

RESPONSE:

The EE/CA investigation of the Former Honey Lake Demolition Area has not yet been initiated, and will not begin until the Time Critical Removal Action (TCRA) is

completed and the RAP document is approved. As indicated in Section 3.0 of the Draft RAP, the U.S. Army Corps of Engineers is currently conducting a Time Critical Removal Action to remove exposed ordnance related materials from the surface of the Honey Lake bed.

COMMENT #23:

"At the last RAB meeting, it was stated that 1/3 of the work described in the CEQA Draft and draft RAP has already been completed. Please explain. Isn't the purpose of the meetings and the CEQA procedure to allow public ...to comment on work to be done?"

RESPONSE:

One third of the lake bed's surface has been cleared under the Time Critical Removal Action. The Honey Lake EE/CA investigation activities will not be initiated until the TCRA is completed and the RAP for disposal of recovered OE is approved.

COMMENT #24:

"We request that the public have input RE: list of contaminants to be tested for."

RESPONSE:

This comment is outside the scope of this RAP. As previously stated, soil sampling will be done as part of the EE/CA investigation. The list of chemical contaminants that will be analyzed for is currently being determined, and has taken input from members of the public into consideration.